

# Spokane River Field Implementation Plan

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## Introduction

Staff from Gravity Consulting, LimnoTech, and Washington Department of Ecology (Ecology) met in Spokane during the week of July 28, 2014 to discuss the *Draft Sampling and Analysis Plan* (SAP) (LimnoTech, July 11, 2014) and to visit each sampling location. The primary objectives of the meeting and field reconnaissance were as follows:

- 1) Ensure roles and responsibilities were understood
- 2) Review the current SAP and discuss any necessary revisions
- 3) Discuss the requirements of the health and safety and invasive species plans (see Attachments A and B)
- 4) Visit each sample location to determine site access and conditions

Based on observations at each sample location, this memorandum provides the recommended sampling approach and schedule for implementing the SAP with consideration of field conditions and health and safety requirements.

## General Sampling Approach

Specific sampling methodology is provided in Section 4 of the SAP and general sample locations are shown in Figure 3 of the SAP. During the site visit, GPS coordinates were collected at each sample location (see coordinates associated with site photos). For the riverine samples, coordinates were collected on the shoreline at USGS gage stations that are adjacent to the location where in-stream samples will be collected. Observations from the reconnaissance survey identified two situations which may change the approach and scope of sampling:

1. To minimize factors that could confound the results (e.g., potential for atmospheric contamination), the preference is to collect samples beneath the water surface. Based on observations during the site visit, this will be feasible at most sample locations, however there are a few locations where an alternative approach is necessary due to access and safety (e.g., avoiding confined spaces). For these locations, a dip sampler is recommended. A dip sampler is a pole that holds sample bottles and is lowered into source water for collection.

- Based on the observations during the site visit, most in river water samples can be collected by wading, however there are a few locations where an alternative approach (i.e., access via a vessel) is necessary. We believe this is critical to collect representative water samples in flowing water nearest to mid-channel as possible.

Recommendations for access and sampling approaches at each sample location are provided in the subsequent section.

## Sampling Location Summary

### **SR-1: Spokane River Below 9 Mile Dam**

Type: In-stream sample at USGS Gage 12426000

Road Access: Field lab accessible on right bank

In-stream Access: Mostly wadable, although possible need for non-motorized vessel

Notes: This location is one of the two where high-volume water sampling will occur.



### **SR-2: City of Spokane Riverside Park Advanced WRF**

Type: Facility discharge

Road Access: Field lab accessible through Gate 2; 4401 N. Aubrey L White Parkway, Spokane

Contact: Mike Cannon 509-625-4600; Jeff Donavon 509-625-4638

Notes: Direct immersion not feasible due to safety; sample will be collected using dip sampler. Generally, sampling can occur between 7 AM and 4 PM.



**SR-3: Spokane River at Spokane**

Type: In-stream sample at USGS Gage 12426000

Road Access: People's Park; 2500-2834 W Clarke Ave, Spokane

In-stream Access: Mostly wadable

Notes: The gage station is located on the right bank across and upstream of the walking bridge location. It was not wadable to mid-channel directly adjacent to the gage, although it is wadable slightly downstream.



**HC-1: Latah (Hangman) Creek at Spokane**

Type: In-stream sample at USGS Gage 12424000

Road Access: High Bridge Park off W. Riverside Ave, Spokane

In-stream Access: Wadable

Notes: The gage station is located on the left bank; little flow observed during the site visit.

**SR-4: Spokane River below Green Street Bridge**

Type: In-stream sample at USGS Gage 12422000

Road Access: Near where N. Greene St crosses over W. Upriver Drive, Spokane. Field lab parking available east (upstream) of the bridge.

In-stream Access: Not wadable at gage station

Notes: The gage station is located on the right bank and a non-motorized vessel will be necessary for sampling



\*note poor satellite coverage at time of photo

**SR-5: Spokane County Regional WRF**

Type: Facility discharge

Road Access: 1004 N. Freya Street, Spokane; field lab accessible

Contact: Dave Moss 509-475-5002; Rob Lindsay 509-477-7576; Tony Benavida 509-688-3862

Notes: Direct immersion not feasible due to safety; sample will be collected using dip sampler through a manhole. Generally, available to sample between 8 AM and 4 PM.



**SR-6: Inland Empire Paper**

Type: Facility discharge

Road Access: 3320 N. Argonne Road, Spokane; field lab accessible

Contact: Doug Karpas 509-924-1911; Ryan Ekre 602-315-4281

Notes: One-way traffic (clock-wise) around the facility; all sampling staff are required to see safety video before vehicle access is granted. Direct immersion is possible.

**SR-7: Spokane River below Trent Street Bridge**

Type: In-stream sample at USGS Gage 12421500

Road Access: E. Trent St, Spokane. Field lab parking available in Planter's Ferry Park (soccer complex).

In-stream Access: mostly wadable

Notes: The gage station is located on the right bank.



**SR-8: Kaiser Aluminum**

Type: Facility discharge

Road Access: 15000 E. Euclid Ave, Spokane; field lab accessible

Contact: Bud Leber 509-927-6554

Notes: Disposable plastic bottles are restricted from entering the facility. Sample location is in a sink in a small building. Sampling method - shut off water value, drain water, scrub sink with brush and rinse, refill to overflow point, collect submerged samples.



**SR-9: Spokane River at Greenacres**

Type: In-stream sample at USGS Gage 12421500

Road Access: N. Barker Road, Greenacres. Field lab parking available in parking area southeast of the bridge.

In-stream Access: Wadable

Notes: The gage station is located on the left bank off the Centennial Trail upstream of the bridge. At the time of the site reconnaissance, it was understood that this gage station is currently inactive, which was later confirmed by LimnoTech. Gravity will conduct a transect survey and measure current profiles with a sontek ADCP or a similar device. The river survey will provide a USGS approved model to calculate a real-time flow measurement at the Greenachres sample location.

**SR-10: Liberty Lake Sewer and Water District**

Type: Facility discharge

Road Access: Near intersection of N. Harvard Road and Indiana Ave, behind the fire station; field lab accessible

Contact: Bi-Jay Adams 509-922-9016 or 509-370-1574; Dan Grogg 509-370-1453

Notes: Sampling via direct immersion appears feasible. Generally, sampling can occur between 8 AM and 5 PM.



**SR-11: Post Falls WWTP**

Type: Facility discharge

Road Access: 2002 W Seltice Way, Post Falls; field lab accessible

Contact: John Beacham 208-457-3374; Don Ellis 208-457-3380

Notes: Sampling via direct immersion appears feasible. Generally, sampling can occur between 7 AM and 4 PM.



**SR-12: Spokane River at Post Falls**

Type: In-stream sample at USGS Gage 12419000

Road Access: S. McGuire Road to S. Breezy Way in a residential area. Field lab parking available in parking area southeast of the bridge.

In-stream Access: Not wadable at gage station and will require non-motorized vessel.

Notes: The gage station is located on the right bank; access is available near a sharp corner on Breezy Way and alongside a residence that is currently listed for sale. Better access and parking is available at McGuire Park which is approximately 1 km upstream of the gage and at a wadable location.

**SR-13: Hayden Area Regional Sewer Board WWTP**

Type: Facility discharge

Road Access: 10789 N Atlas Rd, Hayden, ID; field lab accessible

Contact: Ken Windram 208-772-0672 or 208-691-6593

Notes: Facility discharge throughout the summer is to area fields and there is no low flow discharge to the Spokane River. Because of this there is no summer dechlorination. Appears this is unnecessary to sample during the August (low flow) sampling event.



**SR-14: Coeur d'Alene WRF**

Type: Facility discharge

Road Access: 765 W. Hubbard Ave, Coeur d'Alene; field lab accessible

Contact: Don Keil 208-769-2347; John Dearth 208-277-8416

Notes: Direct immersion not feasible due to safety; sample will be collected using dip sampler after dechlorination. Generally, available to sample between 8 AM and 5 PM.



**SR-15: Lake Coeur d'Alene Outlet**

Type: In-stream sample at USGS Gage 12417610

Road Access: Field lab accessible on right bank off W. River Avenue

In-stream Access: Not wadable, likely need motorized vessel particularly since this is also a high volume water sampling location.

Notes: This location is one of the two where high-volume water sampling will occur.

**Recommended Sampling Schedule**

Conditions necessary to begin sampling require that; 1) flows in the Spokane River at Spokane (Gage 12422500) are less than 1210 cfs, 2) a minimum of two weeks passed since daily rainfall greater than 0.2 inches as measured at Felts Field, and 3) a forecast that contains no days of predicted rainfall greater than 50 percent for the following three days. As of August 4, 2014, these conditions have been met. Considering this, along with the need to finalize coordination with laboratories, dates of sample bottle receipt, and equipment preparation, it is anticipated that the sampling will begin on Tuesday, August 12, 2014. This would require mobilization to Spokane, Washington on Monday, August 11, 2014. The proposed general schedule for the August 2014 sampling event is provide below:

August 11, 2014 - Morning: Gravity, Ecology, and LimnoTech sampling and oversight staff mobe to Spokane. Afternoon: Pre-sampling organization of sample bottles, forms, equipment, etc. Also, at 3:30 PM, sampling staff will attend a 30 minute safety meeting/video at Inland Empire Paper.

August 12<sup>th</sup>, 14<sup>th</sup>, 16<sup>th</sup>, 18<sup>th</sup>, 20<sup>th</sup>, 22<sup>nd</sup>, and 24<sup>th</sup> – Collect samples at the 8 river gage sample locations. Possible real-time monitoring of flow at the Greenacres gage station site (need is still to be determined).

August 15<sup>th</sup> and 23<sup>rd</sup> – Collect high volume water samples at 2 river gage sample locations.

August 13<sup>th</sup>, 19<sup>th</sup> and 21<sup>st</sup> – Collect samples from discharges at 7 facilities. Note: it is anticipated that the Hayden Area Sewer Board facility will not require sampling since it does not discharge to the Spokane River during the summer.

The complete schedule is provided in Table 1, which provides details on daily tasks including the number of sample bottles, analyses, replicates, and QA samples for each station and sampling day.

### **Sample Holding and Delivery**

Samples being analyzed for TOC, DOC, TSS, and TDS will be dropped off daily at Silver Valley Analytical Lab's (SVL) Coeur d'Alene lab. Samples will be delivered by Gravity staff. The exception will be on the weekend, where Gravity will retain samples in the field lab and keep them chilled until delivery on Monday morning. SVL staff will be responsible for filtering samples for DOC at the laboratory and Gravity will ensure that there is no headspace in DOC sample containers. SVL is located at 2195 Ironwood Ct, Coeur d'Alene, ID 83814.

Samples collected for PCB analysis will be retained in the field lab and kept at <4°C until shipment to AXYS.